ABSTRACT

An optical fiber having one or more resin coatings is manufactured by applying at least one electron beam-curable resin composition to a bare optical fiber, and exposing the resin composition to electron beams to cure the resin composition. The EB-curable resin composition contains (A) 10-90% by weight of a urethane (meth)acrylate oligomer and (B) 90-10% by weight of a reactive diluent. The exposure to electron beams is done under conditions including (a) an acceleration voltage of 50-150 kV, (b) a distance of 0.5 mm to less than 10 mm between an electron beam window and the optical fiber surface, (c) an atmosphere of nitrogen or helium under atmospheric pressure, having (d) an oxygen concentration of up to 1,000 ppm, and (e) at least two directions of irradiation to the optical fiber.